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EXAMINER

SHIFERAW, ELENI A

ART UNIT PAPER NUMBER

2136

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,464

Applicant(s)

IWAMURA, KEIICHI

Examiner

Eleni A. Shiferaw

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 14-27 is/are pending in the application.
- 4a) Of the above claim(s) 12-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Amendment

1. Applicant's arguments/amendments with respect to canceled claim 12-13, amended claims 1-3, 5-11, and 14-27, and presently pending claims 1-11 and 14-27, filed on December 1, 2005 have been fully considered but are moot in view of new ground(s) of rejection.
2. The examiner accepts the amended Abstract in view of the Examiner's objection.

Response to Arguments

3. Applicant argues that:
 - a. Independent claims 1, 14 and 22-23 are not taught by Wu to include "*embedding a watermark into encrypted partial content, or decrypting the encrypted partial content in which the watermark is embedded and compositing it with other partial after decryption*" (page 11-12).
 - b. The Wu reference fails to support claims 18 and 26, wherein "*embedding a digital watermark in content by a scheme corresponding to a discrimination result of discriminating a type of apparatus that processes the content*" (page 13).
 - c. The references fail to disclose claims 15 and 24 wherein "*decrypting an encrypted partial content in which a watermark is embedded after encryption, and then compositing the decrypted partial content with another partial content*" (page 14).

d. The references fail to support independent claim 16, 20, 25, and 27 wherein *“embedding a digital watermark in content by a scheme corresponding to a result of discriminating whether an output style of content is a first style or a second style”* (pages 12-13).

e. Dependent claims are allowable based upon their dependency on allowable independent claims

However, Examiner disagrees with applicant.

Regarding argument (a), Argument is not persuasive. Wu teaches the method of embedding watermark on an article and the method comprising segmenting an article, selecting segmented portions of the article, encrypting the segmented portion of the article and watermarking the encrypted portion of the article (col. 8 lines 27-30, 38-42, and 56-58, and col. 2 lines 7-8 and fig. 3 no. 304B).

Regarding argument (b), Argument is not persuasive. Applicant appears to argue the type of apparatus that processes the content is a display apparatus. However a type of apparatus that processes the content is also an apparatus that embeds the digital content or watermark-embedding apparatus also processes the content. Therefore, Kudora clearly disclose the claimed subject matter wherein “a discrimination unit configured to discriminate a type of apparatus that processes content” (see Kudora col. 5 lines 12-13).

Regarding argument (c), Argument is not persuasive. Wu teaches the method of embedding watermark on an article and the method comprising segmenting an article, selecting segmented portions of the article, encrypting the segmented portion of the article and watermarking the encrypted portion of the article (col. 8 lines 27-30, 38-42, and 56-58, and col. 2 lines 7-8 and fig. 3 no. 304B) and also decrypting the encrypted partial content in which a watermark is embedded after encryption, and then composing the decrypted partial content with another partial content (col. 5 lines 12-13, col. 9 lines 66-col. 10 lines 12 and col. 4 lines 16-32).

Regarding argument (d), both Wu and Xu disclose embedding a digital watermark in content by a scheme corresponding to a result of discriminating whether an output style of content is a first style or a second style. Wu teaches embedding a watermark if the content style is a passport, or credit cards, or bank notes, or lottery tickets, or secure forms (abstract). Xu discloses embedding watermark by discriminating whether the outputting style of content is multimedia content or video content or audio content or digital image content (par. 0001 and 2 par. 0024).

Regarding argument (e), examiner disagrees with applicant. Based on the arguments set forth by the examiner for arguments (a) - (c), the dependent claims stand rejected.

The examiner is not trying to teach the invention but is merely trying to interpret the claim language in its broadest and reasonable meaning. Therefore, the examiner asserts

that the system of the prior art, Wu, Xu and Kuroda teach or suggest the subject matter as recited in independent claims 1, 14-16, 18, 20, and 22-27. Dependent claims 2-11, 17, 19, and 21 are also rejected at least by virtue of their dependency on independent claims and by other reason set forth in this office action dated February 10, 2006. Accordingly, rejections for claims 1-11, and 14-27 are respectfully maintained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 6-7, 10-12, 14, 20-23, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu et al. (Wu, Patent No.: US 6,748,533 B1).

As per claims 1 and 22, Wu teaches a system/method for embedding a digital watermark in contents, comprising:

a segmentation unit configured to segment objective content into a plurality of partial contents (cot. 8 lines 22-58; *extracting one or several invariant features of the selected portions of the data*);

an encryption unit configured to encrypt at least one partial of the plurality of partial contents obtained by said segmentation means (fig. 3 no. 304B, cot. 8 lines 27-30, 38-42, & 56-58,

and col. 2 lines 7-8; *encrypting the extracted one or several invariant features of the selected portions/info of the data*);

a digital watermarking unit configured to embed a digital watermark in the partial content encrypted by said encryption unit (cot. 9 lines 51-52, and fig. 3 no. 308; *embedding watermark on one or several invariant features of the selected portions of the data*);

a decryption unit configured to decrypt the partial content encrypted by said encryption unit and in which the digital watermark is embedded by said digital watermarking unit (cot. 5 lines 12-13, and col. 9 lines 66-col. 10 lines 12); and

a composition unit configured to compose the partial content obtained by said decryption unit and other partial content obtained by said segmentation unit (cot. 4 lines 18-32).

As per claims 14, and 23, Wu teaches an apparatus/method for embedding a digital watermark in contents, comprising:

a digital watermarking unit configured to embed a digital watermark in an encrypted partial content of objective content, which are segmented into a plurality of partial contents, some of which are encrypted (col. 9 lines 51-52, and fig. 3 no. 308; *embedding watermark on one or several invariant features of the selected portions of the data, the selected portions are encrypted*); and

a unit configured to pass the partial content embedded with the digital watermark by said digital watermarking unit to another apparatus or another unit of said apparatus (col. 2 lines 27-28; *passing ... electronic document or printed document ... document printer/apparatus... electronic document apparatus*).

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As per claims 15 and 24, Wu teaches an apparatus/method for compositing a plurality of partial contents obtained by segmenting objective contents, comprising:

a decryption unit configured to decrypt encrypted partial content in which a digital watermark is embedded after encryption (col. 5 lines 12-13, and cot. 9 lines 66-col. 10 lines 12); and

a composition unit configured to compose the decrypted partial content and another partial content (cot. 4 lines 18-32; *decrypted...put together and outputted*).

As per claims 20 and 27, Wu teaches an apparatus/method for embedding a digital watermark in contents, comprising:

discrimination unit configured to discriminate a format of content (abstract fig. 1, and col. 8 lines 49col. 9 lines 23; *discriminating...style/article...if an article is ...passport, credit cards, bank notes, lottery tickets, or secure forms*); and

digital watermarking unit configured to embed a digital watermark in the content by a scheme corresponding to a discrimination result of said discrimination (fig. 2 no. 224, 204, and 244).

As per claim 2, Wu teaches the system, wherein said segmentation unit segments the objective contents on the basis of at least one of a frequency band of the objective contents, a feature of the objective contents, and a type of said digital watermarking unit (col. 9 lines 22-34).

As per claim 3, Wu teaches the system wherein one apparatus has said respective unit (cot. 2 lines 5-10).

As per claim 6, Wu teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to a purpose of use of the contents (cot. 2 lines 2728).

As per claim 7, Wu teaches the system/apparatus, wherein the purpose of use of the contents includes at least one of a print process and monitor process (cot. 3 lines 62-63), and

said digital watermarking unit embeds a digital watermark having robustness corresponding to the purpose of use (col. 8 lines 27-32, and 38-44).

As per claim 10, Wu teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to the objective contents (fig. 2 no. 204, 224, and 244).

As per claim 11, Wu teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to a format of the objective contents (fig. 1, and cot. 8 lines 49-col. 9 lines23).

6. Claims 18, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuroda et al (Kuroda, Patent No.: US 6,707,774 B 1).

As per claims 18 and 26, Kuroda teaches an apparatus/method for embedding a digital watermark in contents, comprising:

a discrimination unit configured to discriminate a type of apparatus that processes content (Kuroda cot. 25 lines 62-col. 26 lines 3); and

a digital watermarking unit configured to embed a digital watermark in the content by a scheme corresponding to a discrimination result of said discrimination unit (Kuroda col. 25 lines 62-col. 26 lines 3).

7. Claims 16-17, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu (Pub. No.: US 2004/0059918 A1).

As per claims 16 and 25, Xu teaches an apparatus/method for embedding a digital watermark in contents, comprising:

discrimination unit configured to discriminate whether an output style of content is a first style or a second style (par. 0001 and 2 par. 0024; *discriminating... multimedia content...if content is an audio...video... image... watermarking audio...video...image...*); and

digital watermarking unit configured to embed a digital watermark in the content by a scheme corresponding to a discrimination result of said discrimination unit (page 1-2 par. 0010, and par. [0023-0024]).

As per claim 17, Xu teaches the system/apparatus, wherein said digital watermarking unit embeds a digital watermark having robustness corresponding to the output style (page 2 par. 0022).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (Wu, Patent No.: US 6,748,533 B1) in view of Kuroda et al. (Kuroda, Patent No.: US 6,707,774 B1).

As per claim 8, Wu teaches all the subject matter as described above. Wu fails to teach the system, wherein the purpose of use of the contents includes a process of the objective contents using an apparatus, and

said digital watermarking means embeds a digital watermark corresponding to a type of apparatus used.

However Kuroda discloses wherein the purpose of use of the contents includes a process of the objective contents using an apparatus, and said digital watermarking unit embeds a digital watermark corresponding to a type of apparatus used (Kuroda col. 25 lines 62-col. 26 lines 3).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to embed digital watermark corresponding to a type of apparatus used. One skilled in the art would have been motivated to do so because it would protect digital content from being played/copied/printed on unauthorized type of apparatus.

As per claim 9, Wu and Kuroda teach all the subject matter as described above. In addition, Kuroda teaches the system, further comprising output unit for outputting the objective contents after digital watermarking in a data format corresponding to the type of apparatus used (Kuroda col. 25 lines 13-27). The rationale for combining are the same as claim 8 above.

10. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (Wu, Patent No.: US 6,748,533 B1) in view of Natarajan (Pub. No.: US 2004/0034781 A1).

As per claim 4, Wu teaches all the subject matter as described above. Wu fails to teach, wherein said system is formed by a plurality of apparatuses.

However Natarajan discloses deriving a watermark from the encrypted message digest and embedding the watermark into the digital data (abstract). Performing the various steps of watermarking process separately by different computers and processors and the results is combined to achieve the overall function of watermarking (Natarajan page 6 par. 0056 lines 20-25).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to form watermarking by a plurality of apparatus. One of ordinary skill in the art would have been motivated to incorporate the teachings of performing watermarking by a plurality of apparatus because it would have fast execution time, efficient processing speed, and good performance.

As per claim 5, Wu and Natarajan teach all the subject matter as described above. In addition, Natarajan teaches the system, wherein a first apparatus has said segmentation unit, said encryption means, said decryption unit s, and said composition unit, and a second apparatus has said digital watermarking unit (Natarajan page 6 par. 0056 lines 20-25). The rational for combining are the same as claim 4 above.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. (Kuroda, Patent No.: US 6,707,774 B1). Xu (Pub. No.: US 2004/0059918 A1).

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As per claim 19, Kuroda teaches all the subject matter as described above. Kuroda fails to explicitly teach digital watermark having robustness corresponding to the type.

However Xu teaches the system/apparatus, wherein said digital watermarking unit embeds a digital watermark having robustness corresponding to the type (page 2 par. 0022).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the teachings of Xu within the system of Kuroda. One skilled in the art would have been motivated to incorporate watermark having robustness corresponding to the type because it would provide an excellent resistance to unauthorized removal/robustness and various kinds of unauthorized manipulation (page 2 par. 0022).

12. Claim 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (Wu, Patent No.: US 6,748,533 B1) in view of Xu (Pub. No.: US 2004/0059918 A1).

As per claim 21, Wu discloses all the subject matter as described above. Wu fails to teach wherein robustness watermarking. However Xu teaches the system/apparatus, wherein said digital watermarking unit embeds a digital watermark having robustness corresponding to the output style (page 2 par. 0022).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the teachings of Xu within the system of Wu. One skilled in the art would have been motivated to incorporate watermark having robustness corresponding to the type because it would provide an excellent resistance to unauthorized removal/robustness and various kinds of unauthorized manipulation (page 2 par. 0022).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A. Shiferaw whose telephone number is 571-272-3867. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.S.

February 10, 2006


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